

CLAIMS

The invention claimed is:

1. A rearview mirror assembly for a vehicle comprising:
a housing configured for attachment to the vehicle;
a mirror positioned in said housing;
a turn signal light source; and
a door illuminator light source configured to project light towards the door handle
and/or locking mechanism of the vehicle.
2. The rearview mirror assembly of claim 1, wherein said mirror is an electrochromic mirror.
3. The rearview mirror assembly of claim 1, wherein said light sources comprise at least one LED device.
4. The rearview mirror assembly of claim 1 and further comprising a blind spot indicator light source for indicating when an object is detected in a blind spot of the vehicle.
5. The rearview mirror assembly of claim 1, wherein said door illuminator light source is further configured to function as a blind spot indicator light source for indicating when an object is detected in a blind spot of the vehicle.

6. The rearview mirror assembly of claim 1, wherein at least one of said light sources is disposed behind said mirror so as to project light through said mirror.
7. The rearview mirror assembly of claim 1, wherein said turn signal light source and said door illuminator light source are mounted in a common lamp module.
8. The rearview mirror assembly of claim 1, wherein said door illuminator light source is activated during both a door illumination lighting mode and a turn signal lighting mode.
9. The rearview mirror assembly of claim 8, wherein said turn signal light source and said door illuminator light source are coupled to a control circuit for receiving activation signals therefrom.
10. The rearview mirror assembly of claim 9 and further comprising a second door illuminator light source coupled to the control circuit, wherein the control circuit sequentially activates said door illuminator light sources and said turn signal light source during a turn signal lighting mode.
11. The rearview mirror assembly of claim 1, wherein said door illuminator light source is disposed behind said mirror so as to project light through said mirror.
12. A light module for a vehicle rearview mirror assembly, said light module comprising:
a turn signal light source; and

a door illuminator light source configured to project light at a portion of a door of the vehicle.

13. The light module of claim 12, wherein said turn signal light source and said door illuminator light source comprise at least one LED device.

14. The light module of claim 12 and further comprising a reflector having at least two reflector cups, wherein said turn signal light source and said door illuminator light source each comprise at least one LED device, and wherein each LED device is associated with one of said reflector cups.

15. The light module of claim 12, wherein said door illuminator light source emits effective white light and said turn signal light source emits light of a color selected the group consisting of: amber, red, orange, and red-orange.

16. A light module for a vehicle rearview mirror assembly, said light module comprising:
a blind spot indicator for indicating when an object is detected in a blind spot of the vehicle; and
a door illuminator configured to project light at a portion of a door of the vehicle.

17. The light module of claim 16, wherein said light module includes at least one LED device that is selectively actuated to function as both said blind spot indicator and said door illuminator.

18. The light module of claim 17 and further including a deviator for redirecting a portion of the light emitted from said at least one LED device towards the eyes of a driver of the vehicle for blind spot indication.

19. The light module of claim 18 and further comprising a reflector disposed relative to said at least one LED device to direct light emitted from said at least one LED device in a desired direction, said deviator being a facet in said reflector.

20. The light module of claim 17, wherein said at least one LED device emits effective white light when operating in a door illumination mode and emits light of a different color when operating in a blind spot indicator mode.

21. The light module of claim 16 and further including a turn signal light.

22. A rearview mirror assembly for a vehicle comprising:

a housing configured for attachment to the vehicle;

a mirror positioned in said housing;

a turn signal light;

a door illuminator light configured to project light at a portion of a door of the vehicle;

and

a blind spot indicator light for indicating when an object is detected in a blind spot of the vehicle.

23. The rearview mirror assembly of claim 22, wherein said door illuminator light includes at least one LED device for emitting effective white light.

24. The rearview mirror assembly of claim 23, wherein said at least one LED device includes a plurality of differently colored LED chips, and wherein at least one of said LED chips is selectively energized to function as said blind spot indicator light.

25. The rearview mirror assembly of claim 24, wherein said at least one LED device includes an LED chip that emits red light when activated to provide a warning of an object in the vehicle's blind spot.

26. The rearview mirror assembly of claim 22, wherein said at least one LED device includes a first LED chip that emits amber light when activated to provide an indication that a blind spot detection system to which the LED device is coupled is operational.

27. The rearview mirror assembly of claim 26, wherein said at least one LED device further includes a second LED chip that emits blue-green light, when said first and second LED chips are simultaneously activated the LED chips emit light that mixes and forms effective white light illumination that is projected towards a door handle of the vehicle.

28. The rearview mirror assembly of claim 22, wherein said at least one LED device includes a first LED chip that emits blue-green light when activated to provide an indication that a blind spot detection system to which the LED device is coupled is operational.
29. The rearview mirror assembly of claim 22, wherein said lights are provided in a common light module.
30. The rearview mirror assembly of claim 22, wherein at least one of said lights is positioned behind said mirror so as to project light through said mirror.
31. The rearview mirror assembly of claim 22, wherein said door illuminator light source is disposed behind said mirror so as to project light through said mirror.
32. A light module for a vehicle rearview mirror assembly, said light module comprising:
a blind spot indicator for indicating when an object is detected in a blind spot of the vehicle; and
a turn signal light.
33. The light module of claim 32 and further comprising a reflector disposed to direct light emitted from said turn signal light and said blind spot indicator in a desired direction.
34. A mirror subassembly for a vehicle comprising:
a mirror element; and

a turn signal indicator mounted behind said mirror element, said turn signal indicator comprising a first light source, a second light source, and a third light source, wherein said first, second, and third light sources are sequentially activated.

35. The mirror subassembly of claim 34, wherein said first light source is activated and then deactivated prior to activation of said second light source, and wherein said second light source is activated and then deactivated prior to activation of said third light source.

36. The mirror subassembly of claim 35, wherein said third light source is deactivated shortly after it is activated and then the lighting sequence repeats with said first light source being activated.

37. The mirror subassembly of claim 34, wherein said first light source is activated and then said second light source is activated and then said third light source is activated, subsequently said first light source is deactivated and then said second light source is deactivated and then said third light source is deactivated at which time the activation/deactivation sequence repeats.

38. A rearview mirror assembly for a vehicle comprising:
a mirror housing for mounting to the vehicle;
a mirror element disposed in said mirror housing; and

a turn signal indicator disposed in said mirror housing, said turn signal indicator comprising a first light source, a second light source, and a third light source, wherein said first, second, and third light sources are sequentially activated.

39. The mirror assembly of claim 38, wherein said first light source is activated and then deactivated prior to activation of said second light source, and wherein said second light source is activated and then deactivated prior to activation of said third light source.

40. The mirror assembly of claim 39, wherein said third light source is deactivated shortly after it is activated and then the lighting sequence repeats with said first light source being activated.

41. The mirror assembly of claim 38, wherein said first light source is activated and then said second light source is activated and then said third light source is activated, subsequently said first light source is deactivated and then said second light source is deactivated and then said third light source is deactivated at which time the activation/deactivation sequence repeats.

42. An exterior rearview mirror assembly for a vehicle comprising:
a mirror housing for mounting to the exterior of a vehicle;
a mirror element disposed in said mirror housing; and
a first light source disposed proximate said mirror element, said first light source being operable in a first lighting mode in response to a first activation signal, and in a second lighting mode in response to a second activation signal.

43. The mirror assembly of claim 42, wherein the first light mode includes one of a turn signal indication mode, a security illumination mode, and a blind spot indication mode.

44. The mirror assembly of claim 42 and further comprising a second light source disposed proximate said mirror element, wherein said second light source operable in one of a turn signal indication mode, a security illumination mode, and a blind spot indication mode.

45. The mirror assembly of claim 44 and further comprising a third light source, wherein said first, second, and third light sources are sequentially activated.

46. The mirror assembly of claim 42, wherein said first light source includes an LED device that emits light of at least two different colors selectable for the first and second lighting modes.

47. The mirror assembly of claim 42 and further comprising and further comprising a control circuit for generating the first and second activation signals to control the lighting mode of said first light source.

48. The mirror assembly of claim 42 and further comprising a deviator for redirecting a portion of the light emitted from said first light source towards the eyes of the driver of the vehicle.

49. The mirror assembly of claim 42 and further comprising a reflector disposed relative to said first light source to direct light emitted from said light source in a desired direction, said deviator being a facet in said reflector.

50. The mirror assembly of claim 42, wherein said first light source emits amber light during a turn signal mode.

51. The mirror assembly of claim 42 and further comprising a heat sink, wherein said first light source includes an LED device having a heat extraction member that is thermally coupled to said heat sink.

52. The mirror assembly of claim 51, wherein said heat extraction member is physically coupled to said heat sink by a heat stake.